User's Manual

Personnel Grounding Tester

PGT®130.DT

V1.2

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Introduction

The PGT®130.DT is a compact testing system for checking Personnel grounding with ESD shoes, wrist straps systems and smocks according to IEC 61340-5-1 and ANSI ESD S20.20.

The user identification is possible via integrated RFID reader or via any external HID-compatible USB input device e.g. barcode scanner, keyboard or magnetic stripe reader.

Multiple devices can be networked together and managed by the DataTermD software. User data and measurement data can be managed centrally.

General notice:
Persons with pacemaker or pregnant women should consult a doctor before using the device.

The PGT®130.DT must be operated with the originally supplied power supply.

The maximum USB cable length is 2 m

Notice for measurement:

The sensor plate must be pressed with several finger tips at once.
After a short time period the measurement values are displayed.
Keep the sensor plate pressed during the complete measurement.

Notice for RFID:

The integrated universal RFID reader can read the frequencies 125 kHz / 134,2 kHz and 13,56 MHz. This includes common transponder types like EM4x, HITAG, ISO14443A, ISO14443B, ISO15693.

By default the unique serial number of the presented card is read in hexadecimal notation.

Please contact us for individual configuration if your company cards are not detected or if you need different data of the card for personnel identification.

If you're using dual cards (ID-cards with two different transponders) your card can be detected with two different ID's. Contact us to adjust the reader to your requirements.

Important Notice

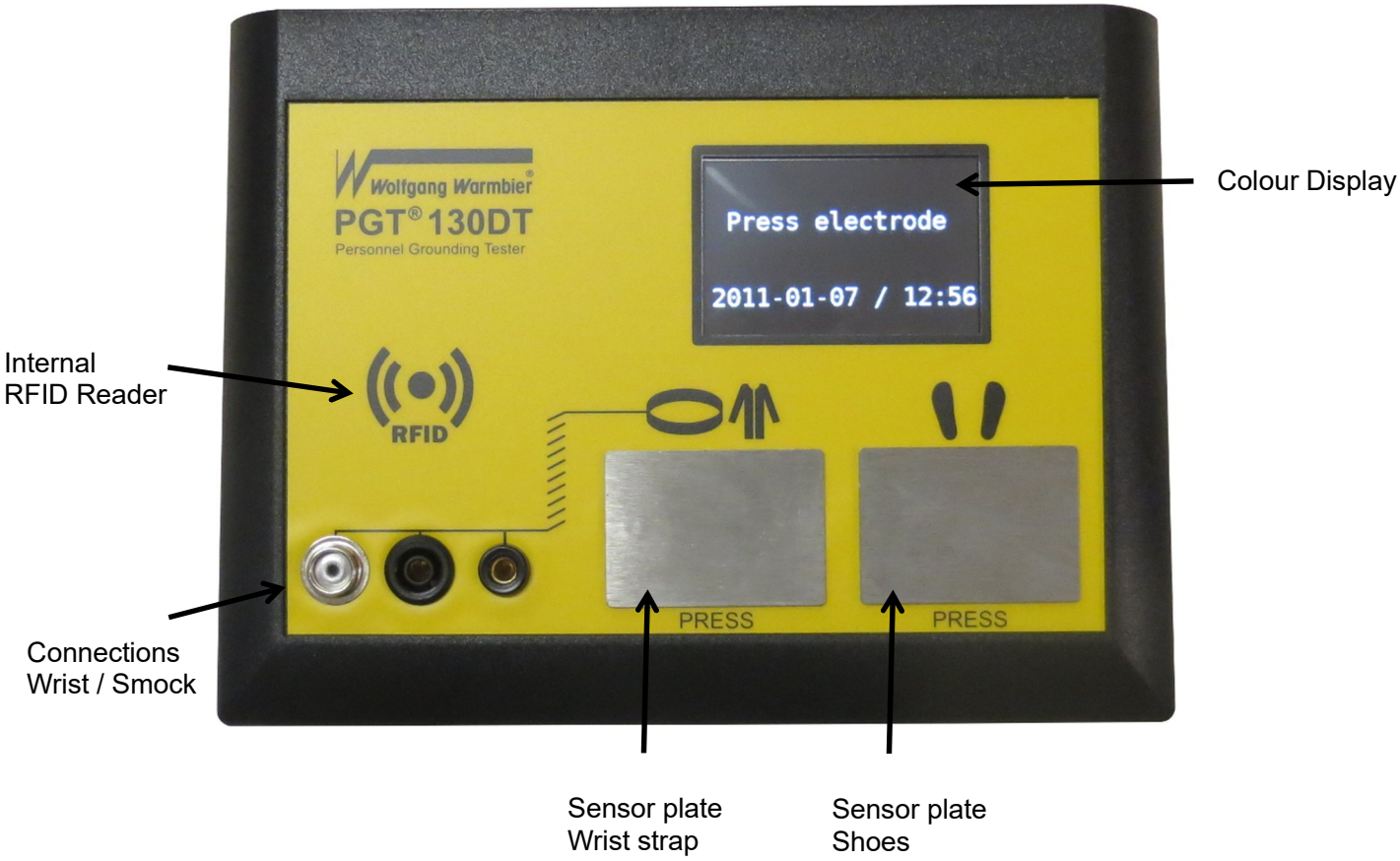
Please read the following instructions carefully.
1. PGT®130.DT cleaning
   - Switch off the device by disconnecting the power supply
   - Spray a non-solvent based cleaner onto a soft fabric and wipe the surface carefully
2. Don't remove the cover, don't try to repair the device yourself
3. Observe the operating conditions
4. The USB cable length must not exceed 2 meter
5. Use only the power supply, which was included in the scope of delivery

Scope of Delivery

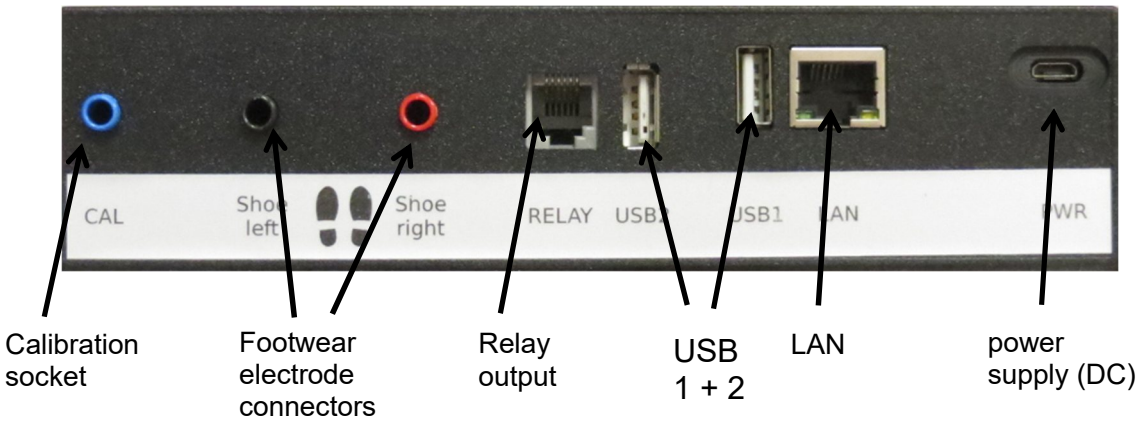
- Personnel Grounding Tester PGT®130.DT
- Power supply (EU / US)
- Footwear electrode
- User's manual
- Calibration certificate (German / English)

Installation

Device overview



Rear Connections



Connections

PWR
Power supply

LAN
Ethernet Interface

USB1 / USB2
External component connectors

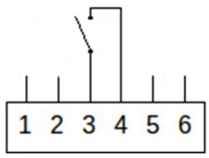
- Optional external input device (needs to be connected in USB 2)
- Temperature/Humidity Sensor
- Label printer
- Beacon light

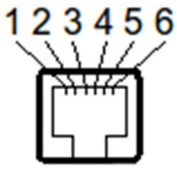
RELAY
Door opener output (Solid State Relay)
Switches if the measurement is within the limit values and a valid user was identified.
Contact between pin 3 and 4.

Contact-less, solid state relay to switch **24V/DC (16V/AC**) **ohmic load** up to **2A**.

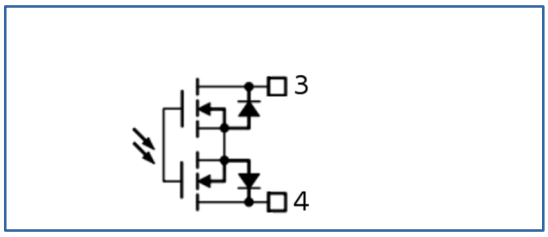
This output is designed to switch ohmic loads directly.
To switch inductive loads, it is required to protect the relay from over-voltage surge with recovery diode or RC-combination/ snubber.

Output contact: Pin 3 and 4





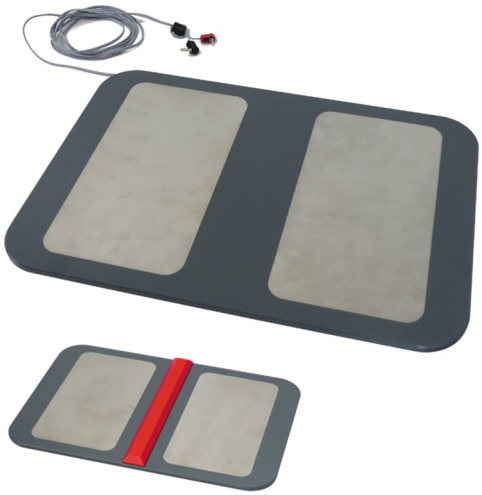
Schematic drawing of the relay



Footwear electrode

Cable outlet is configurable to
(middle, **right** and left)

Dimension:	500 x 350 x 9mm (WxLxH)
Electrode:	2 x (300 x 160 mm)
Cable length:	2,5 m
Separator:	optional



Footwear electrode with optional red separator

Installation

1. Connect the footwear electrode to the red and black socket.
2. If you wish to use external input device connect it to the USB2 socket.
3. Connect the external Temperature/Humidity sensor via supplied extension cable to the device if applicable.
4. If you're using printer functionality connect the label printer to a free USB port.
5. If applicable, connect the network cable to the LAN socket.
6. Connect the supplied power supply to the PWR socket.

Use only the original power supply which was included in the scope of delivery.
Rebooting is required to activate new connected USB devices.

Initial Operation - Local

If you operate the device in stand-alone you can configure it in front via display. The symbols for wrist and shoe are touch sensitive.

Info: *This option can be disabled via web interface settings [Device settings – Config buttons*]

Press the left button for at least 3 seconds

Keep the left button pressed and tap the right button at least 4 times back-to-back

The device switches to configuration mode. The configuration mode does time-out automatically after 5 minutes without operation, settings will stored.

Browse through the parameter menu with the left button. After the last parameter the configuration mode does exit and the settings are stored.

Switch between the available settings with the right button.

Parameter	Funktion
Language	Device language selection **English**, German, Spanish, French
Voltage	Measure voltage 30V, 50V, **100V**
Measure mode	Measure modes AND - Shoe and wrist required **OR** - Shoe or wrist measurement WRIST - Only wrist measurement required SHOE - Only shoe measurement required
Buzzer	Internal buzzer **ON**, OFF
Low Limit	Low limit for shoe measurement (100kΩ) and wrist strap system measurement (750kΩ) **ON**, OFF
High Limit Shoe	High limit for shoe measurement 20 MΩ, 35MΩ, 70 MΩ, **100 MΩ**
High Limit Wrist strap	High limit for wrist strap / smock measurement **35 MΩ**, 100MΩ, 1000 MΩ* (*100V Measure voltage required)
Hands-free mode	Measurement without hands (shoe to shoe) ON, **OFF**
Relay pulse length	Relay pulse length **1s**, 2s, 3s
Internal RFID	Internal RFID reader **ON**, OFF
Calibration	Measurement display for device calibration

Default settings are in bold

Initial Operation via Network

The PGT®130.DT is ready within 50 seconds after plugging-in the power supply. If the Ethernet cable is connected, the device tries to configure its network by DHCP. Therefore a DHCP server should be available within the network. A label indicating the assigned IP Address will be printed on system start-up if the label printer is connected. The IP-Address is displayed temporarily on the LCD display as well.

System clock can be set by DHCP as well (042 timeserver).
If Internet access is available, the system clock will synchronized with a NTP timeserver.
The configured DHCP hostname will be sent to the DHCP server if available.

If DHCP configuration fails the default IP-Address **192.168.1.1** will be used.
It is possible to enter a different IP-Address manually.
Entering a fixed IP-Address will deactivate DHCP.

To configure the Data Terminal enter the assigned IP-Address into your browser's URL-field.

The first access opens the configuration page without asking for a password.
Adjust and safe the settings to continue.

Important settings:
The time zone, date and time must first be set in System settings

After saving the settings and logging in you find the optional sections Device, Network and Advanced in the Configuration menu.

Optional settings:

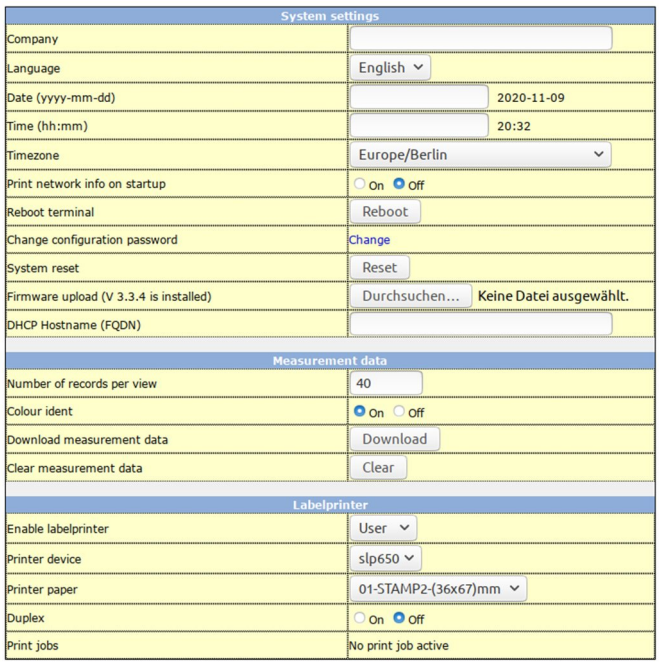
- Configure measure voltage, measure mode and limit values in section Device.
- If desired you can configure a fixed IP-Address in section Network.
- Settings for User data synchronization are available in section Advanced.

Configuration

Administration password is required for configuration. The default login is User: ***admin*** Password: ***admin***. The user can change the password.

System settings

- Company name or independent text. This will be printed on the first line of each label. The user ID can be printed instead, if user identification is enabled and this field is blank.
- WEB-interface language
- Set the date
- Set the time
- Select current time zone
- Print assigned IP-Address after each system start-up
- Reboot the terminal
- Change the configuration password
- System reset (measurement data and settings will be erased)
- Firmware upload
- DHCP hostname configuration



Measurement data

- Select amount of records to be viewed in measurement data view
- Enable or disable colored marking of failed test
- Download measurement data as CSV file
- Clear all measurement data

Label printer

- Enable or disable the Label printer. Select "ID<99" to print the
- label only if the entered user ID has less than three characters.
- Printer and paper selection
- Delete pending print jobs

Device settings

- Measure voltage: 30V, 50V, **100V**
- Measure modes:
  - AND - Shoe and wrist measurement required
  - **OR** - Shoe measurement
  - WRIST - Only wrist measurement required
  - SHOE - Only shoe measurement required
- Internal buzzer: **ON**, OFF
- Low limit shoe (100kΩ) and wrist (750kΩ) **ON**, OFF
- Upper Limit Shoe
  - 20 MΩ, 35MΩ, 70 MΩ, **100 MΩ**
- Upper limit Wrist
  - **35 MΩ**, 100MΩ, 1000 MΩ (100V measure voltage required)
- Measurement without hands (shoe to shoe)
  - ON, **OFF**
- Relay pulse length: **1s**, 2s, 3s
- Internal RFID reader: **ON**, OFF (OFF= external or no input device)
- Enable/Disable configuration buttons: **ON**, OFF (Tempering protection)

Device settings	
Test voltage	100 V
Measure mode	OR
Beeper	On Off
Low Limit	On Off
Shoe upper limit	100 MΩ
Wrist/Smock upper limit	35 MΩ
Hands-free	On Off
Relais pulse length	1 Seconds
Internal RFID reader	On Off
Config Buttons	On Off

Manual IP-Address Configuration

- Log into the configuration page with your username and password.
- Select **Configuration -> Network**
- Enter the desired IP-Address and associated Netmask carefully.
- If required, a gateway address can be
- defined.
- Save the settings and reboot the device with **Configuration -> Reboot.**

Fixed IP address (If set DHCP will be disabled)	
IP-Address	
Netmask	
Gateway	

Recovery

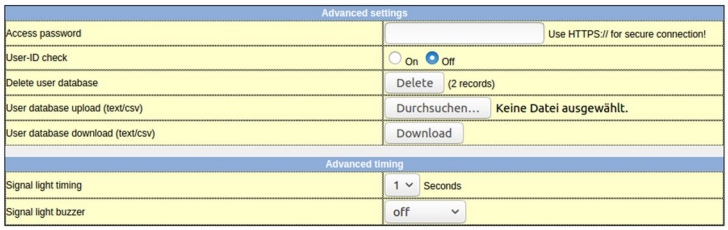
If you've entered an incorrect IP-Address, the device is not accessible within the network any more.

To rectify the faulty settings keep the right button pressed during start-up. Hereby the manual settings are ignored and the device will start with network defaults.

Extended Configuration

Settings for measurement data retrieval and user data synchronization are available here.
It is recommended to use HTTPS instead of HTTP as secure communication for measurement and user data transfer. You can additionally define a password for the communication.

- Access password: Password for the connection
- User-ID check: Access for only persons defined in the user database (no anonymous access)
- Delete the user database
- Upload user data via CSV file. The file must contain the column ID and Name. Lines with # at the beginning are ignored.
- Use Semicolon or Tab-Stop as Separator and file extension TXT or CSV. Character coding is UTF-8
- Download user data as TEXT/CSV file



Optional beacon

- Signal light timing
- Signal light buzzer settings

Sysinfo

- Display of software versions
- System time
- Device's IP and MAC-address
- Last measurement poll-time
- Last sync of user data and amount of records
- USB device status

System info	
Web frontend version	3.3.0
Program version	3.3.0 (running)
Package version	
System version	#2 SMP PREEMPT Wed May 8 15:09:43 CEST 2019
System time	2020-03-29 / 18:39
IP address	192.168.2.138
MAC address	6e:d3:16:b6:00:38
Last measurement poll	None
Last User-DB sync	2020-03-27 / 19:37 (2 records)
Copyright	**Wolfgang Warmbier GmbH & Co. KG** Systeme gegen Elektrostatik

Connected devices	
Printer	off
Signal light	off
T/H-Sensor	off
RFID	on

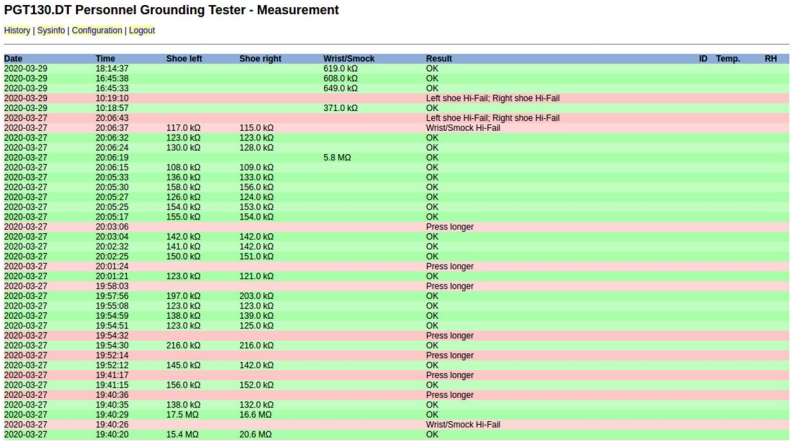
External input device on USB2

Instead of using the internal RFID reader you can connect an external input device like barcode scanner, magnetic stripe reader or keyboard.

In this case you must disable the internal RFID reader in the configuration menu and restart the device. If a valid external input device is detected during start-up the user identification will be handled by that device.
Valid input devices are devices which identify themselves on the USB-Bus as Human Interface Device (HID). Only one HID-Device can be connected at the same time. Use port USB2 for this because it provides a maximum power of 500mA.
The expiration time for the User-ID is 10 seconds.

Test data

Test data view is the main entry page. A configurable number of records are displayed, including test data, date, time and test result. Measurement data view is updated every 20 seconds.
The current temperature and the relative humidity is recorded if the **T/H-Sensor** is connected.
For identified users the user ID shows up. If the ID is linked to a username, then the username is displayed instead.



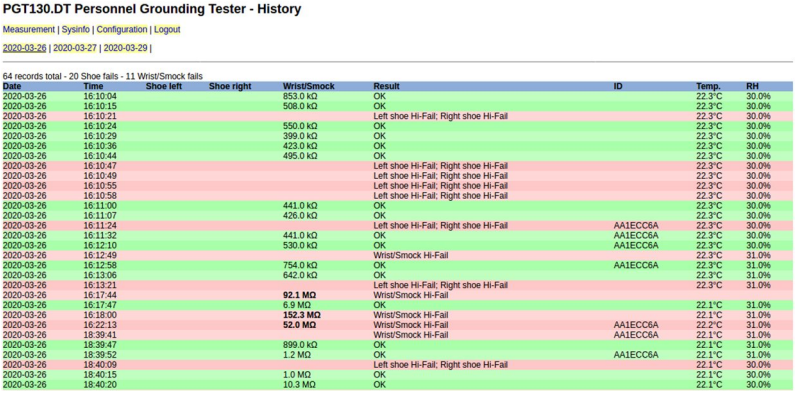
PGT130.DT Personnel Grounding Tester - Measurement

History | Sysinfo | Configuration | Logout

Date	Time	Shoe left	Shoe right	Wrist/Smock	Result	ID	Temp.	RH
2020-03-29	18:14:37			619.0 kΩ	OK			
2020-03-29	16:45:38			608.0 kΩ	OK			
2020-03-29	16:45:33			649.0 kΩ	OK			
2020-03-29	10:19:10				Left shoe Hi-Fail; Right shoe Hi-Fail			
2020-03-29	10:18:57			371.0 kΩ	OK			
2020-03-27	20:06:43				Left shoe Hi-Fail; Right shoe Hi-Fail			
2020-03-27	20:06:37	117.0 kΩ	115.0 kΩ		Wrist/Smock Hi-Fail			
2020-03-27	20:06:32	123.0 kΩ	123.0 kΩ		OK			
2020-03-27	20:06:24	130.0 kΩ	128.0 kΩ		OK			
2020-03-27	20:06:19			5.8 MΩ	OK			
2020-03-27	20:06:15	108.0 kΩ	109.0 kΩ		OK			
2020-03-27	20:05:33	136.0 kΩ	133.0 kΩ		OK			
2020-03-27	20:05:30	158.0 kΩ	156.0 kΩ		OK			
2020-03-27	20:05:27	126.0 kΩ	124.0 kΩ		OK			
2020-03-27	20:05:25	154.0 kΩ	153.0 kΩ		OK			
2020-03-27	20:05:17	155.0 kΩ	154.0 kΩ		OK			
2020-03-27	20:03:06				Press longer			
2020-03-27	20:03:04	142.0 kΩ	142.0 kΩ		OK			
2020-03-27	20:02:32	141.0 kΩ	142.0 kΩ		OK			
2020-03-27	20:02:25	150.0 kΩ	151.0 kΩ		OK			
2020-03-27	20:01:24				Press longer			
2020-03-27	20:01:21	123.0 kΩ	121.0 kΩ		OK			
2020-03-27	19:58:03				Press longer			
2020-03-27	19:57:56	197.0 kΩ	203.0 kΩ		OK			
2020-03-27	19:55:08	123.0 kΩ	123.0 kΩ		OK			
2020-03-27	19:54:59	138.0 kΩ	139.0 kΩ		OK			
2020-03-27	19:54:51	123.0 kΩ	125.0 kΩ		OK			
2020-03-27	19:54:32				Press longer			
2020-03-27	19:54:30	216.0 kΩ	216.0 kΩ		OK			
2020-03-27	19:52:14				Press longer			
2020-03-27	19:52:12	145.0 kΩ	142.0 kΩ		OK			
2020-03-27	19:41:17				Press longer			
2020-03-27	19:41:15	156.0 kΩ	152.0 kΩ		OK			
2020-03-27	19:40:36				Press longer			
2020-03-27	19:40:35	138.0 kΩ	132.0 kΩ		OK			
2020-03-27	19:40:29	17.5 MΩ	16.6 MΩ		OK			
2020-03-27	19:40:26				Wrist/Smock Hi-Fail			
2020-03-27	19:40:20	15.4 MΩ	20.6 MΩ		OK			

History

One month's test data storage is separated for each day. Use the browser's printing function to print.



PGT130.DT Personnel Grounding Tester - History

Measurement | Sysinfo | Configuration | Logout

2020-03-26 | 2020-03-27 | 2020-03-29 |

64 records total - 20 Shoe fails - 11 Wrist/Smock fails

Date	Time	Shoe left	Shoe right	Wrist/Smock	Result	ID	Temp.	RH
2020-03-26	16:10:04			853.0 kΩ	OK		22.3°C	30.0%
2020-03-26	16:10:15			508.0 kΩ	OK		22.3°C	30.0%
2020-03-26	16:10:21				Left shoe Hi-Fail; Right shoe Hi-Fail		22.3°C	30.0%
2020-03-26	16:10:24			550.0 kΩ	OK		22.3°C	30.0%
2020-03-26	16:10:29			399.0 kΩ	OK		22.3°C	30.0%
2020-03-26	16:10:36			423.0 kΩ	OK		22.3°C	30.0%
2020-03-26	16:10:44			495.0 kΩ	OK		22.3°C	30.0%
2020-03-26	16:10:47				Left shoe Hi-Fail; Right shoe Hi-Fail		22.3°C	30.0%
2020-03-26	16:10:49				Left shoe Hi-Fail; Right shoe Hi-Fail		22.3°C	30.0%
2020-03-26	16:10:55				Left shoe Hi-Fail; Right shoe Hi-Fail		22.3°C	30.0%
2020-03-26	16:10:58				Left shoe Hi-Fail; Right shoe Hi-Fail		22.3°C	30.0%
2020-03-26	16:11:00			441.0 kΩ	OK		22.3°C	30.0%
2020-03-26	16:11:07			426.0 kΩ	OK		22.3°C	30.0%
2020-03-26	16:11:24				Left shoe Hi-Fail; Right shoe Hi-Fail	AA1ECC6A	22.3°C	30.0%
2020-03-26	16:11:32			441.0 kΩ	OK	AA1ECC6A	22.3°C	30.0%
2020-03-26	16:12:10			530.0 kΩ	OK	AA1ECC6A	22.3°C	30.0%
2020-03-26	16:12:49				Wrist/Smock Hi-Fail		22.3°C	31.0%
2020-03-26	16:12:58			754.0 kΩ	OK	AA1ECC6A	22.3°C	31.0%
2020-03-26	16:13:06			642.0 kΩ	OK		22.3°C	31.0%
2020-03-26	16:13:21				Left shoe Hi-Fail; Right shoe Hi-Fail		22.3°C	31.0%
2020-03-26	16:17:44			**92.1 MΩ**	Wrist/Smock Hi-Fail			
2020-03-26	16:17:47			6.9 MΩ	OK		22.1°C	31.0%
2020-03-26	16:18:00			**152.3 MΩ**	Wrist/Smock Hi-Fail		22.1°C	31.0%
2020-03-26	16:22:13			**52.0 MΩ**	Wrist/Smock Hi-Fail	AA1ECC6A	22.2°C	31.0%
2020-03-26	18:39:41				Wrist/Smock Hi-Fail	AA1ECC6A	22.1°C	31.0%
2020-03-26	18:39:47			899.0 kΩ	OK		22.1°C	31.0%
2020-03-26	18:39:52			1.2 MΩ	OK	AA1ECC6A	22.1°C	31.0%
2020-03-26	18:40:09				Left shoe Hi-Fail; Right shoe Hi-Fail		22.1°C	30.0%
2020-03-26	18:40:15			1.0 MΩ	OK		22.1°C	30.0%
2020-03-26	18:40:20			10.3 MΩ	OK		22.1°C	30.0%

Table - userdata:

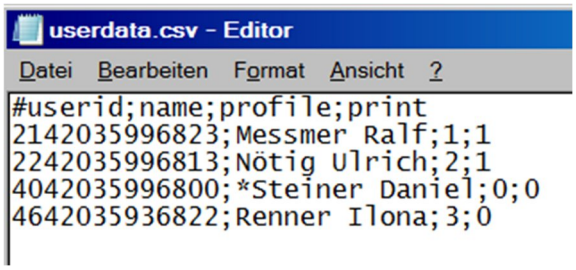
Field	Content	Format
userid	User-ID	String - max. 30 characters (ASCII 32-127)
name	Name	String - max. 30 characters
	optional	
profile	Measure profile	Integer 0= Arbitrary 1= Shoe 2= Wrist 3= Shoe and wrist 4= Single shoe 6= Wrist and single shoe 8= Wrist with glove
print	Label print	Integer 0= off 1= on

View with MS-EXCEL:

	A	B
1	**#userid**	**name**
2	4042035996800	Daniel Steiner
3	2142035996823	Messmer Ralf
4	4642035936822	Renner Ilona
5		

	A	B	C	D
1	**#userid**	**name**	**profile**	**print**
2	2142035996823	Messmer Ralf	1	1
3	2242035996813	Nötig Ulrich	2	1
4	4042035996800	*Steiner Daniel		
5	4642035936822	Renner Ilona	3	0
6				

Data stored as CSV or TXT file:



Additional Option:

profile
If there is a specific number in the field "profile", then the relevant measurement is mandatory for this user

print
If there is the number "1" in Field "print" then the label print is activated for a "passed" test of the specific person. In the printer configuration the setting must be selected to "User".

Special Function:

Service-access without measurement validation
Users whose names are marked with a leading asterisk "*" are allowed to pass even if the measurement values are out of range. The signal will indicate "yellow" instead of "green" and no label will be printed.

Firmware Update

Use **Configuration -> Firmware upload -> Search** to select the appropriate BIN file. Only newer versions can be installed, downgrade is not possible. Use the **Save settings** button on the bottom of the page and wait until the update has finished (at least 3 minutes).

Do not disconnect the power supply during the update.

Operation

Test with user identification
If user identification is enabled the measure profile is controlled by the field "profile" of the user record. Device default settings are used if no user profile is present.

1. Identify yourself with a registered RFID card.
2. Arrow indicators show the required measurement according to the specified user profile. Left – wrist strap / right - shoes.
3. Touch only one sensor plate for measurement.

Test without user identification
If user identification is disabled the device settings are used.
Touch the left sensor for wrist measurement, or the right sensor for shoe- or combined measurement.

Modes / Profiles

Wrist test
Put on the Wrist strap / smock with coil cord and connect the coil cord to the appropriate socket on the left side of the PGT®130.DT. Touch the left sensor. After a short measurement time the color test result (green= pass, / red = fail) and the measurement values are displayed.

Shoe test
Stand on the footplate with both shoes.
Touch the right electrode. After a short measurement time the color test result (green= pass, / red = fail) and the measurement values are displayed.

Shoe and wrist test
Put on the Wrist strap / smock with coil cord and connect the coil cord to the appropriate socket on the left side of the PGT®130.DT. Stand on the footplate with both shoes.
Touch the electrode. After a short measurement time the color test result (green= pass, / red = fail) and the measurement values are displayed.

Single shoe test
This operating mode for handicapped personnel with one artificial leg is only available if user identification is enabled.
Stand on the footplate. Identify yourself with the ID card and then touch the right sensor. After a short measurement time the color test result (green= pass, / red = fail) and the measurement values are displayed.

Glove test
This operating mode is only available if user identification was enabled.
Put on the Wrist strap / smock with coil cord and connect the coil cord to the appropriate socket on the left side of the PGT®130.DT.
Identify yourself with the ID card and then touch the left sensor with the glove.
After a short measurement time the color test result (green= pass, / red = fail) and the measurement values are displayed.

Hands-free test (shoe to shoe)
This operating mode is globally selected within device settings and affects all measurements on this device.
The measurement starts automatically when the footplate was approached with both shoes. After a short measurement time the color test result (green= pass, / red = fail) and the measurement values are displayed.
In this operating mode wrist test is only available if user identification is enabled.
If user identification is enabled identify yourself with the RFID card before approaching the footplate.
For additional Wrist test put on the wrist strap/ smock with coil cord as well. connect the coil cord to the appropriate socket on the left side of the PGT®130.DT.
Identify yourself with the RFID card, then approach the footplate.

Device specification:

Limits and modes

	Test voltage
Test voltage (no-load operation)	100V / 50V / 30V DC
Upper limits	**Measure range**
Wrist / Smock	**35 MΩ**, 100 MΩ, 1 GΩ
Footwear - each shoe	20 MΩ, 35 MΩ, 70 MΩ, **100 MΩ**
Footwear - in series	40 MΩ, 70MΩ, **140 MΩ**, 200 MΩ
Lower limits	**Measure range**
Wrist / Smock	**750 kΩ**, OFF
Footwear	**100 kΩ,** OFF

Technical Data

Power consumption:	ca. 1,6W (5V/DC)	
Power supply:	AC 100–240V 50-60Hz /	DC 5V, 2,5A
Operating conditions:	10 - 40°C	bis 75% r.F.
Storage conditions:	10 - 60°C	bis 75% r.F.
Display:	Result display	Colour display
Measure ranges:	Wrist	100 kΩ - 200 MΩ ± 5% 200 MΩ - 1 GΩ ± 10%
	Footwear	100 kΩ - 200 MΩ ± 5%
Interface:	Wrist	Snap 10 mm, 2 x socket 4 mm
	Footwear	2 x socket 4 mm (red/black)
	Door opener	Western socket 6pol. RJ12
	LAN	Network connector RJ45
	Calibration	Socket 4 mm (blue)
	USB 1 max. 100mA USB 2 max. 500mA (max. 2 m cable length)	
Output	1 x Solid State Relay	24V/DC (16V/AC) 2A - Ohmic load. External protection circuit for switching inductive loads is required!
Modes:	Single test „OR" Double test „AND" Only Wrist strap, Only shoes Hands-Free (Shoes in series)	
Measure time:	< 2 Sec.	
Dimensions:	200 x 150 x 63 mm	Weight: 500 g
Footwear electrode:	500 x 350 x 9 mm	Weight: ca. 2 kg
Safety class:	IP20	

Serial number:	Label on housing side
Design:	For indoor operation Table top / Wall mounting (with optional wall mounting bracket)
	CE compliant

Calibration

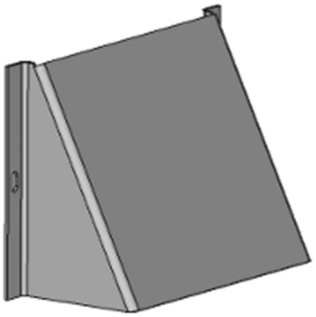
To test the instrument accuracy you can use the optional available Calibration Unit for PGT130.DT.
Detailed instructions can be found in the Calibration unit's user's manual.

Type: PGT®130.DT.CU
Part No.: 7100.PGT130.DT.CU

Accessories

Wall mounting bracket

for device mounting beside doors.



Type: PGT®130.DT.WH
Part No.: 7100.PGT130.DT.WH

Temperature/Humidity Sensor

The current temperature and the relative humidity is recorded if the T/H-Sensor is connected.
The T/H-sensor must be connected via supplied extension cable to the device.

Type: DT-USB-TF
Part No.: 7100.PGT130.DT.TF

Label Printer

Label printing for passed tests with test results and measurement values.
The device is compatible with Seiko Label printer SLP450 and SLP650

Type: SLP650
Part No: 7100.PGT120.COM.D.2

Following consumables are available for the Label Printer:
Self-adhesive labels - color: white. Type: SLP-STAMP2 (36x67mm)
Part No.: 7100.PGT120.COM.D.3

Beacon (Visual Signal Indicator)

Red / green / yellow - visual indication of the access clearance

Type: USB-HID
Part No.: 7100.PGT120.TEST.13

USB-HUB (passive)

To connect multiple optional extensions, a USB-HUB with USB 2.0 / USB 1.1 specification is required. To connect the within this document listed devices a passive HUB (without additional power supply) is sufficient.

Type: USB-HUB4
Part No.: 7100.PGT120.TEST.16

Waste disposal

According to WEEE Directive 2012/19/EU the device is marked with this symbol. This device must therefore not be disposed of with the household waste.

Batteries or **rechargeable batteries** must be disposed at the arranged collection points or according to the relevant national guidelines.

Data Export Interface

Test data can be polled by Time Attendance or Access Control systems via Ethernet Interface.
A HTTP-GET query returns the data in [Content-Type: text/plain Charset: utf-8].
Export data is erased after each poll.

Interface 1 - RAW

URL
http://<ip-address>/cgi-bin/pgt120-data.cgi?fetch=1

0 Records:
```
2011-01-19|16:53||||||no data|||¶
```

1 Record:
```
2011-01-19|16:53||||2786|256|UserID missing||20.1|34.0¶
```

Several Records:
```
2011-01-19|16:53||||2786|256|UserID missing||20.1|34.0¶
2011-01-19|16:54||||OVR|258|Wrist strap Hi-Fail; UserID missing||20.1|34.0¶
2011-01-19|16:55||||2786|OK|||20.1|34.0¶
```

Meaning:
```
date|time|rsg|rsl|rsr|rhg|erg|msg|id|tmp|hum
```

Field	label	Description	Format
1	date	Date of Measurement	2011-01-19
2	time	Time of Measurement	16:53
3	rsg	Result Shoes in Series (kOhm)	Integer
4	rsl	Result Shoe left (kOhm)	Integer
5	rsr	Result Shoe right (kOhm)	Integer
6	rhg	Result Wrist Strap (kOhm)	Integer
7	erg	'OK' or ErrorCode	Number or String (see below)
8	msg	Terminals Message text	String (see below)
9	id	User-ID	RFID-Reader data (Filter: ASCII 32-127, max. 30 digits)
10	tmp	Temperature at measurement	20.1
11	hum	Humidity at measurement	34.0

ErrorCode erg		Message text (EN / DE) msg
OK	=	''
0	=	no data
1	=	Wrist strap Lo-Fail / Handgelenkband Lo-Fail
2	=	Wrist strap Hi-Fail / Handgelenkband Hi-Fail
4	=	Left shoe Lo-Fail / Linker Schuh Lo-Fail
8	=	Left shoe Hi-Fail / Linker Schuh Hi-Fail
16	=	Right shoe Lo-Fail / Rechter Schuh Lo-Fail
32	=	Right shoe Hi-Fail / Rechter Schuh Hi-Fail
64	=	Measuring voltage failure / Fehlerhafte Messspannung
128	=	Press longer / Länger drücken
256	=	UserID missing / UserID fehlt
512	=	Unauthorized user / Unberechtigt
1024	=	Service access / Service Zugang
2048	=	Wrong Measurement / Falsches Messprofil
-10	=	Button released too early / Tastblech zu früh losgelassen

Readings
rsg,rsl,rsr,rhg

OVR	=	Measuring range exceeded / Messbereich überschritten
UNR	=	Measuring range undercut / Messbereich unterschritten

If several errors occur the error numbers are added.
Message text is language dependent (Adjust the language in system settings)

Interface 2 - CSV

Exported data in CSV can directly be opened with spreadsheet programs, i.e. MS-Excel.

Differences to Interface 1:

- Field separation character is Semicolon
- All fields are quoted with double quotes
- If no data is present, then erg is set to "0" and msg is set to "no data"
- Number code (Button released too early) "-10" replaced by 'MTF' (Measuring Time Failure)
- If erg is "OK" then the field msg is set to "OK" as well
- OVR and UNR is suppressed, this filed is empty for over-range or under-range conditions

```
URL
--------
http://<ip-address>/cgi-bin/pgt120-data.cgi?fetch=2
```

0 Records:

```
"2011-01-19";"16:53";"";"";"";"";"0";"no data";"";"";""¶
```

1 Record:

```
"2011-01-19";"16:53";"";"";"";"2786";"256";"UserID missing";"";"20.1";"34.0"¶
```

Several Records:

```
"2011-01-19";"16:53";"";"";"";"2786";"256";"UserID missing";"";"20.1";"34.0"¶
"2011-01-19";"16:53";"";"";"";"";"258";"Wrist strap Hi-Fail; UserID
missing";"";"20.1";"34.0"¶
"2011-01-19";"16:53";"";"";"";"2786";"OK";"OK";"";"20.1";"34.0"¶
```

Meaning:

```
date|time|rsg|rsl|rsr|rhg|erg|msg|id|tmp|hum
```

Field	label	Description	Format
1	date	Date of Measurement	2011-01-19
2	time	Time of Measurement	16:53
3	rsg	Result Shoes in Series (kOhm)	Integer
4	rsl	Result Shoe left (kOhm)	Integer
5	rsr	Result Shoe right (kOhm)	Integer
6	rhg	Result Wrist Strap (kOhm)	Integer
7	erg	'OK' or ErrorCode	Number or String (see below)
8	msg	Terminals Message text	String (see below)
9	id	User-ID	RFID-Reader data (Filter: ASCII 32-127, max. 30 digits)
10	tmp	Temperature at measurement	20.1
11	hum	Humidity at measurement	34.0

ErrorCode erg		Message text (EN / DE) msg
OK	=	OK
0	=	no data
1	=	Wrist strap Lo-Fail / Handgelenkband Lo-Fail
2	=	Wrist strap Hi-Fail / Handgelenkband Hi-Fail
4	=	Left shoe Lo-Fail / Linker Schuh Lo-Fail
8	=	Left shoe Hi-Fail / Linker Schuh Hi-Fail
16	=	Right shoe Lo-Fail / Rechter Schuh Lo-Fail
32	=	Right shoe Hi-Fail / Rechter Schuh Hi-Fail
64	=	Measuring voltage failure / Fehlerhafte Messspannung
128	=	Press longer / Länger drücken
256	=	UserID missing / UserID fehlt
512	=	Unauthorized user / Unberechtigt
1024	=	Service access / Service Zugang
2048	=	Wrong Measurement / Falsches Messprofil
MTF	=	Button released too early / Tastblech zu früh losgelassen

If several errors occur the error numbers are added.
Message text is language dependent (Adjust the language in system settings)

Interface 3 - DatatermD

Special communication format for DatatermD service.

Differences to Interface 1:

- If no data is present, then erg is set to "0" and msg is set to "no data"
- If erg is "OK" then the field msg is set to "OK" as well
- OVR and UNR is suppressed, this filed is empty for over-range or under-range conditions

URL
http://<ip-address>/cgi-bin/pgt120-data.cgi?fetch=3

0 Records:
```
2011-01-19|16:53|||||0|no data|||¶
```

1 Record:
```
2011-01-19|16:53||||2786|256|UserID missing||20.1|34.0¶
```

Several Records:
```
2011-01-19|16:53||||2786|256|UserID missing||20.1|34.0¶
2011-01-19|16:54||||OVR|258|Wrist strap Hi-Fail; UserID missing||20.1|34.0¶
2011-01-19|16:55||||2786|OK|OK||20.1|34.0¶
```

Meaning:
```
date|time|rsg|rsl|rsr|rhg|erg|msg|id|tmp|hum
```

Field	label	Description	Format
1	date	Date of Measurement	2011-01-19
2	time	Time of Measurement	16:53
3	rsg	Result Shoes in Series (kOhm)	Integer
4	rsl	Result Shoe left (kOhm)	Integer
5	rsr	Result Shoe right (kOhm)	Integer
6	rhg	Result Wrist Strap (kOhm)	Integer
7	erg	'OK' or ErrorCode	Number or String (see below)
8	msg	Terminals Message text	String (see below)
9	id	User-ID	RFID-Reader data (Filter: ASCII 32-127, max. 30 digits)
10	tmp	Temperature at measurement	20.1
11	hum	Humidity at measurement	34.0

ErrorCode erg		Message text (EN / DE) msg
OK	=	OK
0	=	no data
1	=	Wrist strap Lo-Fail / Handgelenkband Lo-Fail
2	=	Wrist strap Hi-Fail / Handgelenkband Hi-Fail
4	=	Left shoe Lo-Fail / Linker Schuh Lo-Fail
8	=	Left shoe Hi-Fail / Linker Schuh Hi-Fail
16	=	Right shoe Lo-Fail / Rechter Schuh Lo-Fail
32	=	Right shoe Hi-Fail / Rechter Schuh Hi-Fail
64	=	Measuring voltage failure / Fehlerhafte Messspannung
128	=	Press longer / Länger drücken
256	=	UserID missing / UserID fehlt
512	=	Unauthorized user / Unberechtigt
1024	=	Service access / Service Zugang
2048	=	Wrong Measurement / Falsches Messprofil
-10	=	Button released too early / Tastblech zu früh losgelassen

If several errors occur the error numbers are added.
Message text is language dependent (Adjust the language in system settings)